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AN ANNOTATED LIST OF THE ANTS OF STATEN ISLAND AND LONG ISLAND, N. Y.

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When Prof. Wm. M. Wheeler became an active member of the New York Entomological Society, in October, 1905, some of those who attended the meetings were naturally led to paying attention to the ever-interesting ant and her ways. Not only did it become possible to get specimens named, but field excursions were undertaken by Prof. Wheeler and some of the members of the Society to Long Island, Staten Island, and New Jersey. The Pine Barrens of the last-named State were particularly productive of interesting finds and several new species of ants were collected there. In the Pine Barrens there were also large colonies of the beautiful, shining black *Dolichoderus taschenbergi* var. *aterrimus,* the red and black, but equally shining *Dolichoderus mariae,* and the slow-moving, spiny-backed, fungus-growing *Trachymyrmex septentrionalis.* This last received much attention. On the small pine trees there were occasionally a number of "cow-sheds," built by *Crematogaster pilosa.* It is of interest that this ant has not yet been collected on either Staten Island or Long Island. It is also of interest that no colonies of either *Dolichoderus t.* var. *aterrimus* or *D. mariae* have been found on Staten Island, though both species are resident in the pine barren areas of Long Island. It would seem that at least *D. mariae* subsp. *davisi* Wheeler, not uncommon at Jamesburg and elsewhere in the Delaware Valley region, should also be found on Staten Island, which is included in this region on the faunal map accompanying the late Prof. Smith's Report on New Jersey Insects (1910). While the colonies of the fungus-growing ant have been found far out on Long Island, thus greatly

extending the previously known range of the species, it also is yet to be discovered on Staten Island. Some of these species may at one time have occurred on Staten Island, when the flora of its sandy ground areas had not been so frequently fire-swept, and was more like that to be found at present on parts of Long Island.

Some ants, as is well known, follow certain soil conditions and the accompanying flora, as, for instance, particular plants that support the aphids, coccids, and tree-hoppers they attend. Oak galls of some species, also the secretory glands on the leaves of the *Ailanthus,* wild cherry (*Prunus serotina*), and poplars, sometimes contribute to the support of ants. In the Half Way Hollow Hills, near Wyandanch, L. I., on July 4, 1910, the following ants were found attending the glands near the base of the leaf-blades of *Populus grandidentata: Myrmica scabrinodis schencki* var. *emeryana, Leptothorax longispinosus, L. curvispinosus, Tapinoma sessile, Lasius niger* var. *americanus, Formica fusca* var. *subsericea, Camponotus herculeanus pennsylvanicus* and its var. *ferrugineus.* On another occasion, at Yaphank, June 9 to 11, 1912, the leaf glands on some young *Populus grandidentata* were visited by *Monomorium minutum, Myrmica scabrinodis schencki* var. *emeryana, Dolichoderus plagiatus, Prenolepis imparis, Formica fusca* var. *subsericea, F. neogagates,* and *Camponotus herculeanus pennsylvanicus* var. *ferrugineus.* It must, however, be noted that ants are not the only insects attracted by the foliar nectaries of this poplar, for one finds on them numbers of flies, beetles, bees, etc.

In his annotated List of the Ants of New Jersey (1905), Prof. Wheeler lists 93 species, subspecies, and varieties, but for a number of these no definite localities could be recorded, though they may occur in the State. The revised List of New Jersey Insects published by the late Prof. J. B. Smith in 1910 records 86 forms of ants, but some of his names are undoubtedly based on erroneous identifications. Thus his *Stenamma piceum* evidently duplicates *Aphaenogaster fulva aquia* var. *picea* of the same list; *Lasius umbratus mixtus* var. *affinis* Schenck is a European form not known from North America; and *Formica sanguinea rubicunda* var. *integroides* Wheeler is an ant of the western United States.

On the other hand, a number of additions to the New Jersey ants have been made in recent years, so that 88 distinct forms of Formicidae are at present definitely known to occur in the State. For the sake of comparison with the Long Island and Staten Island List, we subjoin the following revised enumeration of New Jersey ants:

Stigmatomma pallipes (Haldeman).
Ponera coarctata pennsylvanica (Buckley).
Sysphincta pergandei Emery.
Proceratium crassicorne Emery.
Myrmecina graminicola americana Emery.
Monomorium pharaonis (Linnaeus).
Monomorium minimum (Buckley).
Solenopsis molesta (Say).
Crematogaster lineolata (Say).
Crematogaster lineolata var. *lutescens* Emery.
Crematogaster lineolata var. *cerasi* (Fitch).
Crematogaster pilosa Pergande.
Pheidole davisi Wheeler.
Pheidole morrisi Forel.
Pheidole vinelandica Forel.
Pheidole vinelandica var. *longula* Emery.
Pheidole pilifera (Roger).
Stenamma brevicorne (Mayr).
Aphaenogaster treatae Forel.
Aphaenogaster mariae Forel.
Aphaenogaster lamellidens Mayr.
Aphaenogaster fulva Roger.
Aphaenogaster fulva aquia (Buckley).
Aphaenogaster fulva aquia var. *picea* Emery.
Myrmica punctiventris Roger.
Myrmica punctiventris pinetorum Wheeler.
Myrmica scabrinodis var. *sabuleti* Meinert.
Myrmica scabrinodis var. *fracticornis* Emery.
Myrmica scabrinodis schencki var. *emeryana* Forel.
Myrmica brevinodis var. *canadensis* Wheeler.
Leptothorax curvispinosus Mayr.
Leptothorax longispinosus Roger.
Leptothorax fortinodis Mayr.
Leptothorax schaumi Roger.
Leptothorax texanus davisi Wheeler.
Tetramorium caespitum (Linnaeus).
Trachymyrmex septentrionalis (McCook).

Tapinoma sessile (Say).
Tapinoma pruinosum Roger.
Dorymyrmex pyramicus (Roger).
Dolichoderus mariae Forel.
Dolichoderus mariae davisi Wheeler.
Dolichoderus taschenbergi var. *aterrimus* Wheeler.
Dolichoderus plagiatus (Mayr).
Dolichoderus plagiatus var. *inornatus* Wheeler.
Dolichoderus plagiatus pustulatus Mayr.
Dolichoderus plagiatus pustulatus var. *beutenmuelleri* Wheeler.
Brachymyrmex heeri depilis Emery.
Prenolepis imparis (Say).
Prenolepis imparis var. *testacea* Emery.
Prenolepis parvula Mayr.
Prenolepis arenivaga Wheeler.
Lasius niger var. *americanus* Emery.
Lasius niger var. *neoniger* Emery.
Lasius brevicornis Emery.
Lasius flavus nearcticus Wheeler.
Lasius umbratus mixtus var. *aphidicola* (Walsh).
Lasius umbratus minutus Emery.
Lasius umbratus speculiventris Emery.
Lasius interjectus Mayr.
Lasius claviger (Roger).
Lasius claviger subglaber Emery.
Lasius latipes (Walsh).
Lasius murphyi Forel.
Formica sanguinea rubicunda Emery.
Formica sanguinea subintegra Emery.
Formica truncicola integra Nylander.
Formica truncicola obscuriventris Mayr.
Formica difficilis Emery.
Formica exsectoides Forel.
Formica exsectoides var. *davisi* Wheeler.
Formica fusca var. *subsericea* Say.
Formica neogagates Emery.
Formica pallide-fulva Latreille.
Formica pallide-fulva schaufussi Mayr.
Formica pallide-fulva schaufussi var. *incerta* Emery.
Formica pallide-fulva nitidiventris Emery.
Formica pallide-fulva nitidiventris var. *fuscata* Emery.
Polyergus lucidus Mayr.
Camponotus castaneus (Latreille).
Camponotus castaneus americanus Mayr.
Camponotus herculeanus pennsylvanicus (De Geer).

Camponotus herculeanus pennsylvanicus var. *ferrugineus* (Fabricius).
Camponotus herculeanus ligniperdus var. *noveboracensis* (Fitch).
Camponotus caryae (Fitch).
Camponotus caryae var. *minutus* Emery.
Camponotus caryae var. *pardus* Wheeler.
Camponotus caryae subbarbatus Emery.

Of the three ants that have been found on Long Island, but have not yet been recorded from New Jersey, one, *Tetramorium guineense,* is an introduced form, only found in greenhouses and not properly belonging to the local fauna; while the two others, *Strumigenys pergandei* and *Formica truncicola obscuriventris* var. *gymnomma,* will eventually be found in that State. Twenty-three forms of the New Jersey list have not been taken on Long Island. A number of these, such as *Sysphincta pergandei, Monomorium pharaonis, Pheidole vinelandica, Leptothorax schaumi, Camponotus herculeanus ligniperdus* var. *noveboracensis,* probably occur there. Others, however, such as *Crematogaster pilosa, Aphaenogaster mariae, A. lamellidens, Leptothorax texanus davisi,* and *Prenolepis arenivaga,* may not be found farther north than the New Jersey pine barren area.

The present list records 68 species, subspecies, and varieties of ants for Long Island and 55 for Staten Island. While these numbers will undoubtedly be somewhat altered by future investigations, they nevertheless compare very favorably with what is known of the ant fauna of the eastern United States in general, considering the small areas involved (Long Island, with 1,682 square miles; Staten Island, with 58 square miles). New Jersey, with a considerably larger and much more varied territory (7,815 square miles), possesses only few additional forms.

The writers wish to acknowledge their indebtedness to Professor Wm. Morton Wheeler, who has helped them not only with the identification of doubtful specimens, but also in various other ways, especially in criticizing the revised list of New Jersey Formicidae.

PONERINAE.

1. *Stigmatomma pallipes* (Haldeman).

STATEN ISLAND: Arlington, June 9, 1907, under stump in the ground (Ds. Coll.). LONG ISLAND: West Hills; Wading River (Ds. Coll.); North Beach, in damp woods under logs (F. M. Schott Coll.); Yaphank (C. W. Leng Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

These specimens all belong to the var. *wheeleri* Santschi, which, in Prof. Wheeler's opinion, can hardly be distinguished from the typical form.

Though this is not a very rare ant, it is difficult to find, because its colonies are small; they are established in or under stumps, in rich woods. It is most frequently met with sifting. Its larger size and its very long, serrate mandibles separate it readily from the common *Ponera coarctata.*

In September, 1903, a nest of this species was found under a stone, north of Inwood on Manhattan Island, and on September 9, 1905, ants of the same species were found under the same stone. The colonies probably continue for a considerable period in the same place if undisturbed.

2. *Ponera coarctata* (Latreille) var. *pennsylvanica* (Buckley).

STATEN ISLAND: A great number of specimens have been taken at Arrochar, Watchogue, Clove Valley, St. George, and many other places (Ds. Coll.). On September 21, 1919, a nest was found containing workers, several wingless females, and winged males. LONG ISLAND: Wyandanch; East New York; West Hills (Ds. Coll.); Newton Heights (F. M. Schott Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This is a common species in woods where it lives in small colonies under stones, under the bark of decaying trees, under dry leaves, and such like places.

3. *Sysphincta pergandei* Emery.

STATEN ISLAND: Arrochar, near Old Town Road, June 8, 1907, under a stone (Ds. Coll.). A very rare ant.

4. *Proceratium crassicorne* Emery.

STATEN ISLAND: Taken on several occasions, as, for instance,

four workers near Old Town Road, May 13, 1906, and one worker from a log containing the nest of a carpenter ant, November 10, 1907 (Ds. Coll.). Long Island: Cold Spring Harbor, August 2, workers and cocoons in a rotten stump (Wm. M. Wheeler Coll.). These are the specimens recorded under the name *P. silaceum* Roger, in Bull. American Mus. Nat. Hist., XXI, 1905, p. 375; the correction has been communicated to us by Prof. Wheeler.

Myrmicinae.

5. *Myrmecina graminicola* (Fabricius) subsp. *americana* Emery.

Staten Island: Arrochar, June 1, 1907 (Ds. Coll.). Long Island: north of Amagansett (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.). This small ant nests in logs and stumps, in rich woods.

6. *Monomorium minimum* (Buckley).

Staten Island: Clove Valley and elsewhere (Ds. Coll.). Long Island: Rockaway (J. B. Coll.); Wading River; Baldwin; Pinelawn; Wyandanch; Gardiner's Island (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

Nest in the ground, in sandy places. This form is usually recorded as a variety of *Monomorium minutum* Mayr, but Prof. Wheeler informs us that he is now inclined to regard it as a distinct species.

Monomorium pharaonis (Linnaeus) is likely to be found in houses in Brooklyn. It is a very troublesome house ant, introduced from the warmer regions of the Old World. In New York City it has been found on several occasions, as, for instance, August, 1908, in a house at West 83d St., and this year (1921) at West 79th St.

7. *Solenopsis molesta* (Say).

Staten Island: Tottenville, near Mill Creek, nesting in the sand tube made by *Aegeria rileyana,* August, 1920; Long Neck (Ds. Coll.). Long Island: Baldwin; Wyandanch; Yaphank; Brooklyn; East New York (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.); Forest Park, Brooklyn (L. F. Barnum, Jr., Coll.).

The specimens from Wyandanch were found nesting under a

stone, May 1, 1910. This tiny ant is often common in open grassy places, but it is also known to invade houses and nest in the masonry and woodwork.

8. *Crematogaster lineolata* (Say).

Staten Island: Long Neck; Arlington; Watchogue; and many other places (Ds. Coll.). Long Island: Oakdale (F. M. Schott Coll.); Calverton; Yaphank; Half Way Hollow Hills; Deep Pond and Long Pond, Wading River; Wyandanch; Pinelawn; Amagansett; Flushing; Shelter Island; Southhold; West Hills (Ds. Coll.).

This is one of our commonest ants in woods. It most frequently nests under stones or under bark of fallen trees; sometimes inside logs. Like the related *C. pilosa* Pergande, of southern New Jersey, this species also constructs "cow-sheds," though more rarely so. At Yaphank, in July, 1908, a "shed" was found on a young locust tree entwined by a Virginia creeper. It was composed of bits of leaves, bark, parts of flowers, a few grains of sand, etc., and was about the size of a small hickory nut. Further examples of constructions of this kind by *C. lineolata* are described and figured in Wheeler's paper on the habits of the tent-building ant (Bull. American Mus. Nat. Hist., XXII, 1906, pp. 1–18, Pls. I–VI).

On September 21, 1907, at Long Neck, Staten Island, the winged sexes of this *Crematogaster* were leaving a nest for their nuptial flight. They crawled to the top of a fence post and out on the branches of a poison ivy vine. There the workers would pursue them, and seemed to be inducing them to take wing. They would make several efforts with their wings and finally be gone. Two dragonflies, *Anax junius,* were flying above the nest, busily engaged devouring the winged males and females which they captured in flight. Swallows also destroy many ants when these insects are swarming.

9. *Pheidole davisi* Wheeler.

Long Island: Wading River, June 24, 1915 (Ds. Coll.).

10. *Pheidole morrisi* Forel.

Long Island: Long Pond, Wading River; Yaphank; Selden (Ds. Coll.).

This and the preceding species nest in the pure, white sand of the pine barren region, making small craters.

11. *Pheidole pilifera* (Roger).

Staten Island: Tottenville; Arrochar; and elsewhere (Ds. Coll.). Long Island: Aqueduct; Pinelawn; Baldwin; Wyandanch (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This species nests in sandy and gravelly soil and is the only true harvesting ant of our vicinity, storing the chambers of its nest with seeds of grasses and of other plants.

12. *Pheidole vinelandica* Forel.

Staten Island: Watchogue; Richmond Valley; Rossville; Tottenville (Ds. Coll.).

This and the following variety probably occur on Long Island also, where they should be looked for in the pine barren region. They nest in clay mixed with sand, throwing out small craters.

13. *Pheidole vinelandica* var. *longula* Emery.

Staten Island: Tottenville, making numerous small crater nests in sand (Ds. Coll.).

14. *Stenamma brevicorne* (Mayr).

Staten Island: In a salt meadow, November 6, 1907; also on May 13 (Ds. Coll.). Long Island: Cold Spring Harbor, May 19, 1909, two females, one of them winged (Ds. Coll.).

This is a rare species, nesting under stones and dead leaves in shady woods. The specimens of our vicinity are somewhat different from the typical form and should, in Prof. Wheeler's opinion, bear a varietal name.

15. *Aphaenogaster treatae* Forel.

Staten Island: Long Neck and elsewhere (Ds. Coll.). Long Island: Pinelawn, September 28, 1907; Long Pond and Deep Pond, Wading River; Riverhead; Central Park; Calverton; Yaphank; Gardiner's Island (Ds. Coll.).

The nests are burrowed in the sand of open woods.

16. *Aphaenogaster fulva* Roger subsp. *aquia* (Buckley).

Long Island: Little Neck; Huntington (F. M. Schott Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

A number of specimens of this subspecies from the following localities belong to an undescribed variety:

STATEN ISLAND: New Dorp; Clove Valley (Ds. Coll.). LONG ISLAND: Valley Stream; Wyandanch (F. M. Schott Coll.); Half Way Hollow Hills, nest in old log; Amagansett; Baldwin; Yaphank; Gardiner's Island; Selden (Ds. Coll.).

This is one of our commonest ants; like the following variety, it nests in logs and under stones in woods.

17. *Aphaenogaster fulva* subsp. *aquia* var. *picea* Emery.

STATEN ISLAND: Arrochar, June 8, 1907, nest under stone (Ds. Coll.). LONG ISLAND: south of Smithtown (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

18. *Myrmica punctiventris* Roger.

STATEN ISLAND: Isolated specimens at Long Neck and other places (Ds. Coll.). LONG ISLAND: Wyandanch; Yaphank; Amagansett; Gardiner's Island (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This species is rare and usually obtained sifting dead leaves in woods.

19. *Myrmica punctiventris* subsp. *pinetorum* Wheeler.

LONG ISLAND: Yaphank; Long Pond, Wading River (Ds. Coll.).

This is the form of the pure sand of the pine barren region.

20. *Myrmica scabrinodis* Nylander var. *sabuleti* Meinert.

STATEN ISLAND: Found on several occasions; it was seen swarming on September 26, 1891; on June 1, 1892, a nest was found constructed in a clump of grass growing in moist ground, and another similar nest was seen August 28, 1897 (Ds. Coll.). LONG ISLAND: Maspeth (C. E. Olsen Coll.); Orient (J. B. Coll.); Fire Island; Amagansett; Wyandanch; Yaphank (Ds. Coll.).

21. *Myrmica scabrinodis* subsp. *schencki* Emery var. *emeryana* Forel.

STATEN ISLAND: Tottenville; Arrochar; Long Neck; and many other places (Ds. Coll.). LONG ISLAND: Pinelawn; Wading River; Gardiner's Island; Rockaway Beach; Montauk; Yaphank; Central Park; Massapequa; Wyandanch; Half Way Hollow Hills;

Amagansett; Orient; south of Smithtown; Southhold; Fire Island; Brooklyn (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This form is the one recorded as *M. rubra scabrinodis* var. *schencki* in Wheeler's List of the Ants of New Jersey (1905). It is very common in our neighborhood and nests in the ground, preferably in sandy or gravelly and sunny places, such as roadsides, dry pastures, and the like. The tooth or lobe at the base of the antennal scape offers much diversity in specimens taken from different nests and the records here given for *emeryana* probably relate to several forms which, however, have not yet been distinguished in this country.

22. *Myrmica brevinodis* Emery var. *canadensis* Wheeler.

Long Island: Pinelawn (Ds. Coll.).

This is a more boreal ant which nests in bogs and low-lying meadows.

23. *Leptothorax curvispinosus* Mayr.

Staten Island: Richmond; Watchogue; Arrochar; and many other places (Ds. Coll.). Long Island: Half Way Hollow Hills; Wyandanch; Yaphank; Amagansett; Pinelawn (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This ant usually nests in hollow twigs of the elder in shady woods, but we have found it sometimes in decayed wood. On April 18, 1909, a nest was discovered in a stem of purple boneset (*Eupatorium*) at Richmond, S. I. Very frequently, too, the female chooses old galls for its nesting site, so, for instance, on August 12, 1883, a nest was found in an empty fly gall on golden rod, and at Lakehurst, N. J., a nest was observed in the large oak-apple of *Amphibolips confluentus* Harris. Swarming was witnessed July 8, 1907.

24. *Leptothorax longispinosus* Roger.

Staten Island: Willow Brook; May 6, 1906, a nest of this species was found in the bark of a tree; Tottenville; Arrochar (Ds. Coll.). Long Island: Amagansett; Half Way Hollow Hills; Gardiner's Island (Ds. Coll.).

According to Wheeler, this ant nests under small stones lying on large boulders, in the clefts of rocks, and more rarely under bark.

25. *Leptothorax fortinodis* Mayr.

STATEN ISLAND: Found on several occasions at Richmond, running on the trunk of a dead oak, in May and June, 1908, and again May 30, 1909. LONG ISLAND: Calverton (Ds. Coll.).

This is a rare ant in our vicinity. It nests in the bark of dead trees.

26. *Leptothorax schaumi* Roger.

STATEN ISLAND: A few specimens were found at Richmond together with the foregoing species (Ds. Coll.).

L. fortinodis and *L. schaumi* were taken from the same situations, running on the bark of trees. Their distinction seems to be very unsatisfactory.

27. *Tetramorium caespitum* (Linnaeus).

STATEN ISLAND: Arrochar; New Brighton; and elsewhere (Ds. Coll.). LONG ISLAND: Baldwin; Forest Park (Ds. Coll.); Rockaway Beach (J. B. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This ant has been introduced from Europe, but is now well established in the eastern United States. In our neighborhood it is common in gardens and country houses; it has also been found in apartment houses in New York City. Swarming was witnessed on June 18.

28. *Tetramorium guineense* (Fabricius).

LONG ISLAND: Introduced; in the greenhouse of the Botanical Garden, at Brooklyn, January, 1921 (Ds. Coll.).

29. *Strumigenys pergandei* Emery.

LONG ISLAND: Forest Park, Brooklyn, September, 1908; several specimens of this very rare ant were found under a small stone by Mr. L. F. Barnum, Jr.

30. *Trachymyrmex septentrionalis* (McCook).

LONG ISLAND: The fungus-growing ant has now been found in several localities: Wading River, June 1, 1913, June 25, 1913, and May 31, 1914; near Deep Pond and south of Long Pond, Wading River, September 1, 1919; Hauppaug, June 1, 1914; near Mill Pond, south of Smithtown, June 1, 1914; Selden, August 30, 1916 (Ds. Coll.).

All these points are either in the pine barren area or in sandy regions. Previous to its discovery on Long Island, as recorded in the Journal of the New York Entomological Society, March, 1914 (Vol. XXII, p. 64), it had not been found farther north than the vicinity of the Raritan River, New Jersey.

This is the only fungus-growing or cutting ant that extends into the Northern States and it is found only in pine barren or similar sandy regions, nesting in pure sand. "It moves very slowly and is so timid that it retreats into its nest at the slightest alarm. The nest is not easily found except during the spring and autumn when the ants are actively excavating. At such times one may find a circular nest entrance about three sixteenths of an inch in diameter and an inch or two to one side of it a pile of sand brought out by the workers. The entrance leads into an oblique gallery, which widens at intervals into two or three spheroidal chambers, varying from 1 to 2 inches in diameter. Sometimes these chambers form the blind terminations of two or three different galleries branching off from the main or entrance gallery. The rootlets of plants are left spanning the chambers and from these fibrous supports the fungus gardens are suspended. They consist of a substratum of bits of leaves, buds, green seeds, and caterpillar excrement collected by the ants and woven together by the white hyphae of a mould-like fungus, which is carefully cultivated by the insects and constitutes their only food. Since the culture of the fungus depends on definite degrees of moisture and temperature, the ants are very careful of the ventilation of their nest. During the dry spells of midsummer the entrance is closed with bits of leaves and twigs to prevent the escape of the requisite humidity. At such times it is almost impossible to find the nests. In spring, however, when, after the first warm rains, the ants are clearing and renovating their chambers, and again in the fall after they have raised their brood and are preparing for the winter, the external architecture of the nest is more noticeable" (Wheeler).

In May, 1906, this ant was observed at Lakehurst, N. J., carrying the petals of *Gaylussacia* into its nest, as well as a few other bits of flowers, etc. In one instance a flower and part of its stem from a *Gaylussacia* had proven too big to be taken into the nest and had been left near the entrance. In one of the nests that was

opened the chambers were stored with many petals, etc., but chiefly with the flowers of *Gaylussacia*. On August 19, 1909, several winged females were taken on bushes and on the ground at Bonhamtown, N. J., the northernmost locality where this ant has been found in New Jersey.

A more detailed account of the habits of this interesting species is given by Prof. Wheeler in the Bulletin of the American Museum of Natural History, Vol. XXIII, 1907, pp. 746–753.

DOLICHODERINAE.

31. *Tapinoma sessile* (Say).

STATEN ISLAND: Old Place; Todt Hill; Watchogue; Tottenville; etc. (Ds. Coll.). LONG ISLAND: Rockaway Beach; Riverhead; Yaphank; Wading River; Orient; Fire Island; Wyandanch; Pinelawn (Ds. Coll.).

One of the most common local ants. It nests between dry leaves, under stones or pieces of wood, under bark, etc. On June 27 a nest was found raised in the grass of a wet meadow, at the edge of the salt meadows, near Midland Beach, S. I.

32. *Tapinoma pruinosum* Roger.

LONG ISLAND: Yaphank; Wyandanch; Montauk (Ds. Coll.).

33. *Dorymyrmex pyramicus* (Roger).

LONG ISLAND: Wading River (Ds. Coll.).

34. *Dolichoderus mariae* Forel.

LONG ISLAND: Pinelawn; Riverhead; Long Beach; Wyandanch; Calverton; Yaphank; Selden; Massapequa (Ds. Coll.).

During a visit to Pinelawn, L. I., September 28, 1907, in company with Prof. Wheeler and Mr. Beutenmuller, a nest of this species was found about a clump of grass. At Lakehurst, N. J., *D. mariae* more often locates its nest in grass tussocks, especially those of *Andropogon scoparius,* from which the ants remove much of the sand; the grass is frequently stunted as a consequence.

35. *Dolichoderus taschenbergi* (Mayr) var. *aterrimus* Wheeler (*D. taschenbergi* var. *gagates* Wheeler).

STATEN ISLAND: A winged male near the seashore, June 4, 1912; perhaps not nesting on the island (Ds. Coll.). LONG ISLAND:

Wyandanch; Calverton; Central Park; Amagansett; Yaphank; Pinelawn; Massapequa; about a mile north of Coram (Ds. Coll.).

Ants of this species were attending soft, young galls produced by an apparently undescribed cynipid on very young acorns of *Quercus nana,* at Jamesburg, N. J., September 19, 1908.

36. *Dolichoderus plagiatus* (Mayr).

Staten Island: Long Neck; Tottenville; Watchogue (Ds. Coll.). Long Island: Wyandanch (F. M. Schott Coll.); Yaphank; Amagansett; south of Smithtown; Massapequa; West Hills (Ds. Coll.). At Yaphank, July 13, 1907, numerous workers of this ant were attending the nectaries at the base of the leaf-blade of *Populus grandidentata,* on the upper side of the leaf, in company with many other ants, flies, beetles, etc.

37. *Dolichoderus plagiatus* var. *inornatus* Wheeler.

Staten Island (Ds. Coll.). Long Island: Pinelawn; Yaphank; south of Smithtown (Ds. Coll.).

38. *Dolichoderus plagiatus* subsp. *pustulatus* Mayr.

Staten Island: Tottenville (Ds. Coll.). Long Island: Yaphank; south of Smithtown; Massapequa; Wyandanch (Ds. Coll.).

39. *Dolichoderus plagiatus* subsp. *pustulatus* var. *beutenmuelleri* Wheeler.

Long Island: Coram; Wyandanch; Massapequa; Farmingdale; south of Smithtown; Selden (Ds. Coll.).

Formicinae.

40. *Brachymyrmex heeri* Forel subsp. *depilis* Emery.

Staten Island: New Springville, nest under stone, April 15, 1910 (Ds. Coll.). Long Island: Cold Spring Harbor (Wm. M. Wheeler Coll.).

This is the smallest of the local ants and seems to be subterranean or nocturnal in habits.

41. *Prenolepis imparis* (Say).

Staten Island: Tottenville; New Brighton; Watchogue; Long Neck; Annadale (Ds. Coll.). Long Island: Amagansett; Yaphank; Calverton; Montauk; Pinelawn; Deep Pond, Wading River;

Gardiner's Island (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

On March 29, 1910, the departure of the winged sexes from the nest was witnessed.

42. *Prenolepis imparis* var. *testacea* Emery.

STATEN ISLAND: Tottenville (Ds. Coll.). LONG ISLAND: Wading River; Amagansett (Ds. Coll.).

This is a pale-colored form more commonly found in pine barren country. According to Prof. Wheeler, it seems to be somewhat nocturnal in its habits.

43. *Prenolepis* (*Nylanderia*) *parvula* Mayr.

STATEN ISLAND: Long Neck; Arrochar; Tottenville; Watchogue, nesting in sand (Ds. Coll.). LONG ISLAND: Pinelawn; Wyandanch; Central Park (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

Prenolepis (*Nylanderia*) *longicornis* (Latreille), the "crazy ant," in all probability exists in Brooklyn, since it was found in houses in New York City on several occasions. Its original home is India, whence it has spread over a large part of the world and has now become one of the house ants of this country.

44. *Lasius niger* (Linnaeus) var. *americanus* Emery.

STATEN ISLAND: Common everywhere: Arrochar; Arlington; Watchogue; Long Neck; etc. (Ds. Coll.). LONG ISLAND: Flatbush; Rockaway Beach (F. M. Schott Coll.); Maspeth (C. E. Olsen Coll.); Brooklyn; Yaphank; Fire Island; Gardiner's Island; Pinelawn; Wyandanch (Ds. Coll.); Jamaica (J. B. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This is the most abundant and common ant of this vicinity. Workers were seen carrying sand out of their nest as early as March 31 and as late as November 11. At Jamaica, L. I., April 4, 1920, many nests were found under stones in a field, all containing numerous hibernating coccids and aphids. Winged sexual forms were common on Turnpike Road, S. I., April 19, 1920. This species occasionally builds "cow-sheds" over Homoptera, composed of minute fragments of sticks, leaves, and other vegetable matter, also some grains of sand. They are more fragile than

those built by *Crematogaster*. At Yaphank, L. I., on July 26, 1909, it was observed how this ant had in several instances made covered ways, many feet in extent, between the ridges in rough bark of locust trees, leading to its "cows."

45. *Lasius* (*Chthonolasius*) *brevicornis* Emery.

Long Island: Long Beach (F. M. Schott Coll.); Yaphank (Ds. Coll.).

46. *Lasius* (*Chthonolasius*) *flavus* (Linnaeus) subsp. *nearcticus* Wheeler (*Lasius myops* Forel).

Long Island: Cold Spring Harbor (Wm. M. Wheeler Coll.).

This species lives in small colonies, in damp, shady woods, under stones or leaf-mould.

47. *Lasius* (*Chthonolasius*) *umbratus* (Nylander) subsp. *mixtus* (Nylander) var. *aphidicola* (Walsh).

Staten Island: South shore; Mariners' Harbor (Ds. Coll.). Long Island: Gardiner's Island (Ds. Coll.).

A nest in a stump, at Staten Island, opened on April 10, contained aphids.

48. *Lasius* (*Chthonolasius*) *umbratus* subsp. *minutus* Emery.

Staten Island: New Springville, forming a large mound nest (Ds. Coll.).

49. *Lasius* (*Acanthomyops*) *interjectus* Mayr.

Staten Island: Found on many occasions (Ds. Coll.). Long Island: Coram (Ds. Coll.).

A nest under bark, at the base of a tree, opened June 1, 1907, emitted an odor like that of citronella; another in a rotten log smelled strongly of formic acid when opened May 15, 1916.

50. *Lasius* (*Acanthomyops*) *claviger* (Roger).

Staten Island: Common in many places: Clove Valley; Princess Bay; etc. (Ds. Coll.). Long Island: Selden; Amagansett; Riverhead; Long Pond, Wading River; Gardiner's Island (Ds. Coll.); Huntington; Flatbush (F. M. Schott Coll.); North Beach; Maspeth (C. E. Olsen Coll.); Jamaica (J. B. Coll.).

This is a common species, nesting under stones along the edges of woods. The deälated females are occasionally found walking about on mild days in winter.

51. *Lasius* (*Acanthomyops*) *latipes* (Walsh).

Staten Island: Tottenville and elsewhere (Ds. Coll.). Long Island: Selden; Yaphank; Riverhead; Rockaway; West Hills; Wyandanch; Gardiner's Island (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

The nest of this species is rather common in grassy fields, under large stones. One found on Staten Island, April 14, 1907, contained many aphids.

52. *Lasius* (*Acanthomyops*) *murphyi* Forel.

Staten Island: St. George; New Brighton; Clove Valley; Watchogue (Ds. Coll.). Long Island: Rockaway; Baldwin (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

53. *Formica sanguinea* Latreille subsp. *rubicunda* Emery.

Long Island: Coram (Ds. Coll.).

54. *Formica sanguinea* subsp. *subintegra* Emery.

Staten Island: New Brighton; Clove Valley; Watchogue; etc. (Ds. Coll.). Long Island: Yaphank; Half Way Hollow Hills; Riverhead; Pinelawn (Ds. Coll.).

The nests are usually placed under stones in grassy places along the edges of woods. This ant keeps numerous slaves of the black species, *F. fusca* var. *subsericea,* and is often seen carrying one of these about; occasionally workers of *F. schaufussi* are also kept in the nest. At Watchogue, S. I., July 14, 1906, this ant was seen raiding a nest of *Aphaenogaster,* taking the dead victims home for food. Raids either for pupae or food are generally made on the warmest of days.

55. *Formica truncicola* Nylander subsp. *integra* Nylander.

Staten Island: Richmond; near Bradley's Road; Reed's Valley; Great Kills (Ds. Coll.). Long Island: Rockaway Beach (F. M. Schott Coll.); Riverhead; Yaphank; Wyandanch; Deep Pond, Wading River; Half Way Hollow Hills; West Hills (Ds. Coll.); Long Beach (Wm. M. Wheeler Coll.).

This subspecies nests in piles of large stones or old logs and stumps, often in great colonies, and prefers sunny glades or clearings in the woods. Like *F. difficilis,* it attends the young of the membracid *Thelia bimaculata.* At Yaphank, L. I., on July 26,

1909, the young of this tree-hopper were found covered over by these ants about the base of some locusts, and they had also carried material about 1 foot 5 inches up into the rough bark of the trees. The nests of *integra* are not as common on Long Island and Staten Island as those of *F. exsectoides.* They usually consist of bits of wood, leaves, etc., piled up against an old stump or log, and while they receive the warm rays of the sun, they are at the same time much exposed to beating rains. A much better protected nest was found on August 5, 1913, near Riverhead, L. I., where a tree with a hollow base had been chosen by the ants; into it they had piled the usual bits of vegetable matter. In this instance they at least had a substantial roof over their heads. Another case of a substantial roof was a nest found September 19, 1920, on the ledge of the immense drift boulder near Setucket, L. I., built about and under a piece of old tin, which, when removed, caused the ants to squirt formic acid at the intruder. Sometimes these above-ground parts of the nest have some outlying annexes, as, for instance, in the one we once discovered against what appeared to be an old bear trap in the Adirondacks, where the ants also had a collection of material on one of the upper logs entirely separated from the material against the lower logs and on the ground.

At Jamesburg, N. J., on September 20, 1908, a number of workers of this ant were attending galls of *Disholcaspis mamma* Walsh, on *Quercus bicolor,* for the secretion found at the surface.

56. *Formica truncicola* subsp. *obscuriventris* Mayr.

Long Island: Riverhead; Coram; Pinelawn; Wading River; north of Amagansett; Gardiner's Island (Ds. Coll.); Cold Spring Harbor (J. B. Coll.).

57. *Formica truncicola* subsp. *obscuriventris* var. *gymnomma* Wheeler.

Long Island: Cold Spring Harbor (Wm. M. Wheeler Coll.).

58. *Formica difficilis* Emery.

Staten Island: Long Neck; Watchogue; Clove Valley; etc. (Ds. Coll.). Long Island: Coram; Gardiner's Island; Calverton; Yaphank; Selden; Orient; Pinelawn; Half Way Hollow Hills; Wyandanch; Riverhead (Ds. Coll.).

The nesting habits of this species are similar to those of *F. truncicola* subsp. *integra.* At Yaphank, L. I., on July 26, 1908, piles of bits of leaves, moss, sticks, etc., were found about the base of two locust trees that constituted a shelter for immature tree-hoppers, *Thelia bimaculata.* These shelters were built by *F. difficilis* and were cavernous within so that the ants could attend the young tree-hoppers. When the shelters were examined, the ants gave battle by biting and spraying formic acid. The same species of ants was also attending some mature and immature *Thelia bimaculata* further up on the trunks of the small locusts. There was one large, deformed tree-hopper that could not fly that was being patted on the back by a *Formica difficilis,* and the others, both young and mature insects, seemed to regard the attentions of the ants very favorably. The mature *Thelia* could easily have flown away if they were annoyed by the ants, as they so readily did when touched by the human hand ever so gently.

59. *Formica exsectoides* Forel.

Staten Island: Richmond; Kreischerville; Annadale; Mariners' Harbor; near Bradley's Road; Tottenville (Ds. Coll.). Long Island: Wyandanch (F. M. Schott Coll.); north of Amagansett; Yaphank; Deep Pond, Wading River; Selden; Montauk (Ds. Coll.); Farmingdale (J. B. Coll.).

The mound-building ant is generally distributed on Staten Island, but its conspicuous nests are often dug into, which ultimately destroys a colony. North of Amagansett, L. I., in the direction of the Fire Place, some large nests of this species of ant were found in September, 1910; one nest was 10 feet in diameter and 2 feet 9 inches high. Another considerable colony of the mound-building ant is near the western end of Deep Pond, at Wading River, L. I. Near Great Kills, S. I., a colony of the tree-hopper *Vanduzea arquata,* in all stages from little ones up, was found on a locust tree and was attended by *F. exsectoides.*

The mound nests of this *Formica* contain many myrmecophilous beetles. In the Journal of the New York Entomological Society, Vol. XVI, 1908, p. 59, Mr. Leng enumerates the following beetles taken by him on April 28, 1908, in the nests of *Formica exsectoides* at Newfoundland, N. J.: *Tachyura incurva* (Say), *Ptoma-*

phagus parasitus (Leconte), *Cedius ziegleri* Leconte, *Hetaerius brunneipennis* Randall, *Megastilicus formicarius* Casey, *Cremastocheilus castaneae* Knoch, and *Batrisodes fossicauda* Casey.

60. *Formica fusca* Linnaeus var. *subsericea* Say.

Staten Island: A very common ant everywhere, even in the thickly settled parts of the island, where it is often seen on sidewalks. Long Island: Flatbush (F. M. Schott Coll.); Central Park; Wading River; Gardiner's Island; Wyandanch; West Hills; Amagansett; Yaphank (Ds. Coll.); Flushing (J. B. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This ant nests usually in sunny, grassy places and either constructs low mounds or excavates its galleries under stones, boards, the bark of stumps, etc. A nest, 18 feet in diameter, was found at the southern end of Deep Pond, Wading River, L. I., July 26, 1914. At Flushing, L. I., this ant was seen attending coccids on elder. In May, 1913, at Wading River, L. I., a geometrid moth, *Therina pellucidaria,* was seen to fall to the ground from a pine tree, and upon investigation it was discovered that it had been attacked by a *F. fusca,* which was still clinging to it. This species is the usual slave of *Formica sanguinea.*

61. *Formica* (*Proformica*) *neogagates* Emery.

Staten Island (Ds. Coll.). Long Island: Gardiner's Island (Ds. Coll.); Cold Spring Harbor (J. B. Coll.).

62. *Formica* (*Neoformica*) *pallidefulva* Latreille subsp. *schaufussi* Mayr.

Staten Island: Common in many places: Todt Hill; Watchogue; etc. (Ds. Coll.). Long Island: Pinelawn; Amagansett; Yaphank; Deep Pond, Wading River; Wyandanch; Gardiner's Island (Ds. Coll.).

At Tottenville, S. I., on May 29, 1909, a tiger-beetle, *Cicindela generosa,* was seen to attack a *F. p. schaufussi* running on the sand, and then let it go suddenly. Later the same ant twice approached the *Cicindela* and on both occasions the beetle ran away.

63. *Formica pallidefulva* subsp. *schaufussi* var. *incerta* Emery.

Staten Island: Todt Hill (Ds. Coll.). Long Island: Wyandanch; Hempstead (F. M. Schott Coll.); south of Smithtown (Ds. Coll.).

64. *Formica pallidefulva* subsp. *nitidiventris* Emery.

STATEN ISLAND (Ds. Coll.). LONG ISLAND: Amagansett; Calverton; Southhold; Gardiner's Island; Montauk (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

65. *Formica pallidefulva* subsp. *nitidiventris* var. *fuscata* Emery.

STATEN ISLAND: Todt Hill (Ds. Coll.). LONG ISLAND: Wyandanch; Amagansett; Gardiner's Island; Central Park; Montauk (Ds. Coll.).

66. *Polyergus lucidus* Mayr.

LONG ISLAND: Long Pond, Wading River, September 1, 1919; Pinelawn, September 28, 1907; Selden, August 30, 1916 (Ds. Coll.).

In each case this ant was found with its slave, *Formica pallidefulva schaufussi*. The "shining slave-maker" is quite unable to feed itself, excavate its nest, or care for its own brood, but depends for this on the *schaufussi* workers which it kidnaps from their nest in the pupal stage.

67. *Camponotus castaneus* (Latreille).

STATEN ISLAND: June 3, 1893, nest under a stone (Ds. Coll.). LONG ISLAND: Central Park (Ds. Coll.).

This species and the following form nests in the ground, usually under stones or logs.

68. *Camponotus castaneus* subsp. *americanus* Mayr.

STATEN ISLAND: New Brighton and many other places (Ds. Coll.). LONG ISLAND: Wyandanch; Yaphank; Half Way Hollow Hills; Deep Pond, Wading River; Melville; Rockaway Beach; Pinelawn; Gardiner's Island (Ds. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This ant is much more common in our vicinity than the typical form. It is more or less nocturnal and is often found on the sugar mixture placed on the trunks of trees for moths.

69. *Camponotus herculeanus* (Linnaeus) subsp. *pennsylvanicus* (De Geer).

STATEN ISLAND: Common (Ds. Coll.). LONG ISLAND: Central Park; Yaphank; Fire Island; south of Smithtown; Gardiner's Island; Southhold (Ds. Coll.); Huntington (F. M. Schott Coll.);

Springs (J. B. Coll.); Cold Spring Harbor (Wm. M. Wheeler Coll.).

This is the common "carpenter ant," which nests usually in shady woods, in old logs and stumps. Occasionally it invades the woodwork of farmhouses and then visits the kitchen for sweets. The beetle *Xenodusa cava* (Leconte) is a common inmate of its nest. In the Proceedings of the Staten Island Association of Arts and Sciences for November, 1907, several nests of this species are described, and a fine example of their carpenter work in white pine from near Richmond Valley, S. I., is on exhibition in the American Museum of Natural History. Their nests have been found in the trunks of many species of native trees, but the nest differs somewhat with the character of the wood. For many years a nest existed in an old cherry tree near St. George, S. I., and at times little heaps of fine particles of wood accumulated at the base of the tree, indicating the activity of the ants within. Ants from this nest would ascend a near-by pear tree and, choosing one or two pears, eat out the interior, leaving large caverns. As a rule, there was no indication from an external view of the pear, of its partly hollow condition, except, of course, the hole used as a door-way by the ants. They were observed at this work on several different occasions, and in August, 1888, it was noted that they had eaten into two pears before they were ripe and made considerable chambers within. However, these same ants were in part beneficial, for on August 15, 1886, one of the ants was seen with a caterpillar of unknown species, and another with a sawfly larva off of a near-by currant bush. These ants, when approached, will sometimes vibrate their abdomens. On another occasion one of these ants was seen in the act of attacking an *Apatela* moth resting on the trunk of a tree, but when the moth flirted its wings the ant went on its way up the tree and let the moth alone. As with the species of *Formica* already referred to, this ant was also observed at Yaphank, L. I., in July, 1908, attending a colony of immature *Thelia bimaculata*. The *Camponotus* had made a shelter for the tree-hoppers at the base of a young locust tree, but its construction was different from the shelters made by *Formica*.

70. *Camponotus herculaneus* subsp. *pennsylvanicus* var. *ferrugineus* (Fabricius).

STATEN ISLAND: Richmond Hill; Watchogue; Clove Valley; etc. (Ds. Coll.). LONG ISLAND: Jamaica; Wyandanch (F. M. Schott Coll.); Yaphank; Amagansett; Coram; Melville; Deep Pond and Long Pond, Wading River; Southhold; Cold Spring Harbor; Half Way Hollow Hills; south of Smithtown (Ds. Coll.).

Camponotus herculaneus subsp. *ligniperdus* var. *noveboracensis* (Fitch) has been recorded from Staten Island in Smith's list of New Jersey insects, but we have seen no specimens from that locality.

71. *Camponotus* (*Myrmentoma*) *caryae* (Fitch) (*C. fallax* var. *nearcticus* Emery).

STATEN ISLAND: Long Neck; Tottenville; etc. (Ds. Coll.). LONG ISLAND: Brooklyn (Wm. M. Wheeler Coll.); Queens (F. M. Schott Coll.); Wading River; Yaphank; Gardiner's Island; Riverhead; Pinelawn; Amagansett; Orient; Central Park; Half Way Hollow Hills (Ds. Coll.); Cold Spring Harbor (J. B. Coll.).

This species and its various forms nest in dead twigs of trees, hollow stems of elder bushes, dry blackberry stalks, etc.

72. *Camponotus caryae* var. *minutus* Emery.

STATEN ISLAND: Long Neck; Clove Valley; etc. (Ds. Coll.). LONG ISLAND: Melville (F. M. Schott Coll.); Jamaica (Wm. M. Wheeler Coll.); Central Park; Massapequa; Yaphank; Amagansett; Deep Pond, Wading River; Coram (Ds. Coll.).

73. *Camponotus caryae* var. *pardus* Wheeler.

LONG ISLAND: Queens (F. M. Schott Coll.); Jamaica (G. v. Krockow Coll.).

PAPERS CONSULTED IN THE PREPARATION OF THE PRESENT LIST.

Davis, Wm. T. 1907. Nests of the carpenter ant. Proceedings Staten Island Association Arts and Sciences, II, pp. 10–12.

—— 1914. The fungus-growing ant on Long Island, New York. Journ. New York Ent. Soc., XXII, pp. 64–65.

—— 1915. A Long Island ants' nest eighteen feet in diameter. Journ. New York Ent. Soc., XXIII, p. 69. Describes a large nest of *Formica fusca* var. *subsericea* found at Deep Pond, Wading River.

—— 1915. Long Island collecting notes. The fungus-growing ant near Smithtown. Bull. Brooklyn Ent. Soc., X, p. 81.

Smith, John B. 1910. Catalogue of the insects of New Jersey. Contains many references to the ants of Staten Island.

Wheeler, Wm. M. 1905. An annotated list of the ants of New Jersey. Bull. American Mus. Nat. Hist., XXI, pp. 371–403.

—— 1906. On the founding of colonies by queen ants, with special reference to the parasitic and slave-making species. Bull. American Mus. Nat. Hist., XXII, pp. 33–105, Pls. VIII–XIV. On Plate XIII, figs. 1 and 2, and Plate XIV, fig. 1, are reproduced photographs of the fine examples of nests of *Formica exsectoides* found near Arlington railroad station, Staten Island, September 10, 1904.

A new form of Harpalus.—*Harpalus gregarius* Fauvel is one of the commonest beetles under stones in the Madeira Archipelago. On January 31, 1921, I collected it at about 3,000 feet, near the Pico do Serrado, in Madeira. On January 20 I obtained a good series on the Ilheo de Cima (Lighthouse Island), Porto Santo. Wollaston long ago called attention to the peculiarities of the Porto Santo form, but remarked that it was variable. I find, however, that the I. de Cima specimens constantly differ, not only in the greater width of the prothorax behind, but also in a character not noticed by Wollaston. In Madeira the innermost stria of each elytron curves outward basally to meet the second stria, while mesad of this is a deeply incised short-curved stria, its posterior end quite free. In the Porto Santo (I. de Cima) form the striae are not so deeply incised and the innermost stria, though bent, continues to the base without approaching the second. Laterad of this is a somewhat oblique short detached stria, which is morphologically equivalent to the deflected end of the first stria in the Madeira insects. The I. de Cima form is therefore quite recognizably distinct, and may be known as subsp. *cimensis,* nov.—T. D. A. Cockerell.